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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/698,135 | 10/31/2003 | William T. Flynn | 65857-0117 | 2828 |

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EXAMINER

DEVORE, PETER T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3751

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,135

Applicant(s)

FLYNN, WILLIAM T.

Examiner

Peter T. deVore

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 34-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 34-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 7, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the throat area" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the throat area" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the spring segments" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-29, 31, 32, and 34-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Lam.

Regarding claim 1, the Lam reference discloses valve assembly comprising a body having a central axis (in middle of body from left side of page to right side of page in Figure 2), a shaped cavity 4, a fluid entry portion (opening in body on left side of page in Figure 2), and a fluid outlet portion (opening in body on right side of page in Figure 2), a valve including a shaped valve head 15 and an elongated portion 16, a portion of the valve head exterior and shaped cavity configured as a modified ellipsoid and sealably engageable (see Figure 2), a guide 10 including a central opening/axis 11 configured to receive the elongated portion (see Figure 2), radially disposed formations 8 connecting the guide to the body (via ring 9) and positioning the guide so the axes align (see Figure 2), a flow path being formed between the valve, radially disposed formations, and body (see Figure 3). Regarding claim 2, the valve assembly further comprises biasing mechanism 21. Regarding claim 3, the valve head engages and disengages the shaped cavity (see Figures 2 and 3). Regarding claim 4, the body is a single integral component in the Figure 2 embodiment. Regarding claim 5, the radial formations above the central axis in Figure 2 can reasonably be construed as a "front centering formation" and the radial formations below the central axis in Figure 2 can reasonably be construed as a "rear centering formation". Regarding claim 6, the area of the body immediately to the left of the fluid outlet portion on Figure 2 can reasonably be construed as a "throat area", and in such case both the front and rear centering formations are adjacent both the throat area and the fluid outlet portion. Regarding claim 7, each thread in Figure 2 can reasonably be construed as a "point of contact" with the body, and in such case both the front centering formation and the rear

centering formation have more than three points of contact with the body. Regarding claim 8, the biasing mechanism is between a portion of the guide and a portion of the valve (see Figure 2). Regarding claim 9, the biasing mechanism is a spring. Regarding claim 10, the elongated portion is a stem and the spring surrounds part of the stem (see Figure 2). Regarding claim 11, the areas of the valve and guide that the spring engages can reasonably be construed as edges (see Figure 2). Regarding claim 12, the spring segments are constrained from overlapping by the valve and guide which both partially surround the spring both inside and outside the valve (see lack of overlap in the two extreme valve positions of Figures 2 and 3). Regarding claim 13, the guide supports the valve through its full range of motion (see Figures 2 and 3). Regarding claim 14, the smaller diameter portion of the elongated portion (the portion that is not wider due to tail 17) is a stem (see Figure 2). Regarding claim 15, the guide directly engages the stem (see Figure 2), and the portion of the guide that the bearings 12 are fitted into can reasonably be construed as offset and engage the stem via the bearings (see Figure 2). Regarding claim 16, the guide provides a stop to restrain movement of the valve away from the fluid entry portion (see Figure 3). Regarding claim 17, the fit between the guide and the valve provides a dampening effect (see col. 3, lines 47-50). Regarding claim 18, the valve assembly further includes connection element 9. Regarding claim 19, the radially disposed formations 8 are guide legs. Regarding claims 20 and 21, there are three guide legs spaced at 120 degree intervals (see Figure 7). Regarding claim 22, the portion of guide proximate reference numeral 6 in Figure 2 can reasonably be construed as a "front centering formation", and the guide leg can reasonably be

construed as extending "rearwardly" (see Figure 2). Regarding claim 23, the portion of the ring 9 that is next to the guide leg can reasonably be construed as a "connection element" of the guide leg (see Figure 2). Regarding claim 24, there is a gap between the guide leg and a portion of the guide proximate reference numeral 24 in Figure 2.

Regarding claim 25, the portion of the guide proximate reference numeral 6 in Figure 2 tapers radially outwardly towards the left of the page in Figure 2. Regarding claim 26, the threaded portion of the body which receives the guide is a recess (see Figure 2).

Regarding claim 27, see the discussion of claims 20 and 23 supra. Regarding claim 28, see the discussion of claims 23 and 26 supra. Regarding claim 29, see the reinforcing components clamping the body in Figure 4, which the recess can reasonably be construed as "under" (see Figure 4). Regarding claim 31, see col. 3, lines 19-21.

Regarding claim 32, the forces between bodies inherent in a threaded connection can reasonably be construed as "outwardly directed radially force". Regarding claim 34, see the discussion of claims 1, 2, 14, 19, 27, and 28 supra, and note that each half of one of the guide legs can reasonably be construed as one of "two front centering formations" and each half of another of the guide legs can reasonably be construed as one of "two rear centering formations". Regarding claims 35-41, as the claimed methods describe no more than providing the various components of the valve disclosed in Lam and placing them in the configuration disclosed by Lam, the claimed methods are inherently performed during fabrication of the Lam valve assembly (see the discussion of the valve components and configuration in the apparatus claim rejections supra). Regarding claim 42, see the separate components clamping the valve assembly in Figure 4, and

the claimed method is inherently performed during fabrication of the configuration of Figure 4. Regarding claim 43, the valve head surface is a combination of several tangent radii (see Figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lam.

The Lam reference discloses a valve assembly as discussed supra, but remains silent as to the material of the valve head and shaped cavity. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the valve head and shaped cavity from metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *Re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Ohta, Hoover, and Parrish references disclose valves with modified ellipsoid shaped heads.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter T. deVore whose telephone number is (571) 272-4884. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pd Pd

Peter T. deVore